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Project Title: Reading disabilities in second language contexts: A review of research and remediation practices

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ABSTRACT

The aim of the present project was (a) to compile an annotated bibliography of the recent relevant reasearch and remediation literature in the area of learning disabilities in the context of bilingual or L2 situations and to (b) make a preliminary classification of remediation practices of learning disabled children in L2 programs. To this end, a computer search was conducted of which the scope was determined by using descriptors in the two major areas of concern here. That is, learning disabilities and contexts involving more than one language, were used as a guide to produce all relevant references. The search was conducted in all relevant periodicals from 1978 to the present. The computer search was supplemented by a manual search in Current Index of Journals in Education and Psychological Abstracts, and finally, by investigating all relevant studies cited by the studies already found to this point.

The Annotated Bibliography

The above search produced less than twenty primary research articles in which issues dealing with learning disabilities or learning problems in L2 contexts were investigated. Aside from the obvious lack of research in the area, the research that has been done seems to be fraught with definitional and methodological problems. For instance, studies frequently do not agree on definitions of learning disabilities, do not make explicit the definitions they are adhering to, or use different (sometimes inconsistent) methods of identifying LD in the subjects. While only the term learning disabilities is being used in this paper, studies reviewed have dealt with language disabilities, reading disabilities and learning problems in general. Furthermore, additional limitations to interpretation of the results stem from the large percentage of these studies which have used the case study approach (e.g. Wiss, 1987) or very small sample sizes (e.g. Perozzi, 1985).

Though many issues in this area are raised in the literature, the research being done addresses only a subset of these. For instance, some studies (e.g. Bruck, 1979; & Trites, 1979) have focused on issues involved with second language learning in the majority language context, particularly in French immersion. Questions being asked here centre around the issue of

whether children who are experiencing learning difficulties in these programs should switch back to a regular monolingual program. Researchers are endeavoring to discover if children with learning disabilities in this context differ in any systematic way from those in regular monolingual programs, and what the consequences of switching might be. Some researchers such as Bruck (1979) appear to support the belief that French immersion is a viable option, even for those with learning or language difficulties, while others (e.g. Trites, 1979) advocate avoiding or switching out of immersion programs for this population, at least until the age of 9 or 10.

Further to the above arguments, other studies have investigated the relationship between learning disabilities in L1 and L2. Questions have included ascertaining how learning disabilities are manifested in both languages and what the effect an LD in L1 might have on L2 development. For instance, Wiss (1987) concluded from her study that "underlying deficient cognitive skills should result in cross linguistic learning disabilities"p31. Similarly, some researchers (e.g. Bruck, 1982; and Perozzi, 1985) have obtained results supporting the idea that a firm grounding in L1 skills is necessary in developing L2 skills and may even enhance both L1 and L2 skills in a second language program, even for LD children. Many of these issues are discussed at length in Cummins (1984).

In addition to these issues, some researchers (e.g. Ambert, 1986) have tried to make the important distinction between "true language disabilities" and problems that reflect a simple transition stage or limited proficiency in the second language. Still, other studies (e.g. Gajar, 1987; and Ganschow & Sparks, 1986) have strived to identify unique characteristics of children who experience difficulties in second language acquisition in hopes of finding predictors that would identify those who might be susceptible to difficulties in the second language context. These studies also have unfortunately been rather inconclusive.

In conclusion, it is clear from this review of the literature that there is a need for much research in this area. While the few studies completed have raised some issues and allowed some conclusions, methodological and theoretical concerns have limited the conclusions that can be drawn. In addition, there are numerous relevant issues being dealt with in theoretical and issue papers but little research to support the many arguments. It is hoped that this project will provide a starting point for future investigation in this area.

Current Practices

The sampling of four local boards has revealed that present practices in the assessment and remediation of children in minority language contexts who are experiencing difficulties fall into two main approaches. The first involves avoiding any standardized assessment for a certain period (typically 2 to 3 years) until the child has developed sufficient proficiency with the second language. The second approach, which appears to be

used much less frequently, involves assessing the child immediately upon arrival into the system in both L1 and L2. The premises are that (1) waiting might waste precious time in remediating a disability and (2) that children might actually decrease in proficiency in the first language over time so the most valid estimate of potential in L1 needs to be made immediately. A preliminary view of current practices in dealing with learning problems in the bilingual or L2 context seems to reflect the lack of a firm research base in the literature.

Ambert, A.N. (1986). Idendtifying language disorders in Spanish-speakers. Journal of Reading Writing & Learning Disabilities International, v2, p21-41.

Problem

The purpose of the present paper was to identify the characteristics of Spanish-speaking children living in the United States who have "true" language disorders and who have limited English proficiency. This was to done by analysing spontaneos speech of a sample of 30 such children.

Procedure

The subjects included 30 Spanish-speaking Puerto Rican children, who were: (1) "limited English proficient", (2) between the ages of 5 and 12, (3) attended public schools in Boston, (4) Spanish dominant as determined by the Language Assessment Scales in both English and Spanish, (5) had Spanish as the language of the home, (6) had language difficulties not attributable to other causes such as English language acquisition, bilingualism, MR, etc.

At least 100 utterances were collected from each child using methods established in previous studies and analysed for global linguistic performance. Comparisons to normal developemental stages were made to establish deviency.

Findings

The author presented difficulties experienced by the subjects in different categories along with examples to illustrate them. These included: (1) Receptive language difficulties such as difficulty in associate sounds with objects or experiences, discriminating tones, remembering words, gender agreement, and pragmatic difficulties; (2) Expressive language disorders, involving articulation difficulties, syntactic and semantic diffulties; (3) Rarely using idiomatic expressions, adjectives, adverbs, and many other constructions.

Conclusions

The author concludes: (1) that normal children would have been misidentified as being language disordered if they were assessed in English and compared to native speakers or if they were assessed in Spanish by assessors not fluent in the regional dialects of the children, (1) the characteristics of the deviations in the language of his sample from that of Spanish-speaking children acquiring English normally needs to be used to help properly identify those children who are truly disordered.

Comments

Though the present study makes some useful observations of the sample not many details were reported of how the children in the sample were actually determined to be language-disabled. Therefore, it is difficult to determine how valid those observations would be in helping to identify language-disabled students in the population of concern.

In addition, control groups would have been helpful in order to make comparisons that would have allowed us to put more faith in the results.

This research focuses on the problem of identifying the LD child who is in the process of learning the second language in contrast to other studies which look at the possibility of foreign language learning and LD as being in a more causal relationship.

Bruck, M. (1982). Language impaired childrens' performance in an additive bilingual program. Applied Psycholinguistics, v3, p451-60.

Problem

The purpose was to examine the relative importance of the following factors to academic achievement in a second language setting: (1) social psychological factors; and (2) psycholinguistic factors. These variables are tested by pitting the negative effect predicted by the Cummins (1979) Threshold Hypothesis against the predicted positive effect of the social psychological variable of being educated in an additive bilingual environment.

Procedure

The design involved assessing 4 groups for linguistic, cognitive, academic and second language skills (levels) in kindergarten then again at the end of grade 1. These groups were (1) French Immersion with a language impairment (27), (2) English stream with a language impairment (27), French immersion normals (34), and (3) English stream normal (29).

Teachers, given guidelines, were asked to refer children who they felt had language problems. These children were then screened on a test developed for the project which included object manipulation tasks, story retelling, sentence imitation and echolalia tests. The criteria for children designated as having problems included: (1) lower than 35 on of 59 items on the screening test; (2) other causes, such as shyness, were excluded in an interview; and (3) greater than 85 on verbal scale of the WISC-R. Normals (matched on sex, age, teacher and father's occupation) had (1) a teacher's judgement of normal language, (2) greater than 50 on the screening test and (3) a judgement of normal in an interview by an experimenter.

The kindergarten battery of tests included: (1) WPPSI, (2) PPVT (form A), (3) The Northwestern Syntaxic Screening Test (Lee, 1971), (4) the ITPA (Auditory Reception, Visual Reception, Auditory Association, Sequential Memory and Visual Sequential Memory subtests), and (5) the Sentence Imitation Test (Golick, 1977).

The grade 1 battery included: (1) all tests re-administered except the WPPSI and form B of the PPVT was given; and in addition (2) WISC (Vocabulary and Similarities), the ITPA (Auditory Closure and Sound Blending), and the Metro Achievement Test Battery (Math Subtest).

Findings

A multivariate analysis of variance was carried out on the WPPSI verbal scale for the 4 groups, using the independent varialbles (1) language of instruction (not significant) and (2) linguistic level (significant effect of the normal group over the problem group). A similar analysis on the performance scale yielded a significant main effect for both of these variables and a significant interraction. A post hoc analysis revealed that the English problem group was significantly lower than the other three groups. Analyses which adjusted for the difference in Performance score (ie. as a covariate) did not make a difference. Hence, these results were taken by the author to support the subject selection procedures which was primarily on the basis of linguistic ability.

A multivariate analysis was carried out on the cognitive and first language measures with grade at testing as a repeated measure. The following results were obtained: (1) no effect of language of instruction, (2) a significant effect of linguistic ability (normals over problem children), (3) a significant effect of time of testing (grade one better than kindergarten performance), (4) a significant interraction of language of instruction and time of testing, although only one test was significant in post hoc analysis, (5) no significant interraction of linguistic level and language of instruction (6) a significant interraction of time of testing and linguistic level, and (7) the three way interraction not significant.

An ANOVA was carried out to test academic achievement and first language skills only in grade one revealing significant effects in both language of instruction (English over French on one measure) and linguistic level (normal over problem). The Anova for second language skills in grade 1 yielded a significant effect of language of instruction (French over English) and a significant interraction though language of instruction yielded nothing here.

Teacher ratings revealed French normal group having better oral production skills than the Frenchh problem group.

An ANOVA of French reading and writing skills showed the French normal group performing better than the French problem group.

Finally, though teacher questionaires seemed to indicate roughly the same percentage of children in English and French having serious difficulties (about 13%), they also indicated only 19% of the French group getting extra help while 71% of the English group was getting help.

Conclusions

The author made the following conclusions from the findings: (1) French problem children acquired proficiency in French at no cost to first language development, academic progress, or cognitive skills, (2) Since performance on the relevent linguistic variables was similar for the French and English problem groups the nonverbal differences probably did not play a role, (3) Immersion program method is efficient for second language learning, even for those with first language impairments, (4) Data are consistent with the Cummins (1980) idea that first language skills predict achievement in a second language program, (5) data do not support the Threshold Hypothesis idea, however, that a low L1 child would be in an L2 program at detriment to overall linguistic developement in both L1 and L2, since this was not the case in the present study, (6) Comparing performance in this majority culture immersion program performance to performance of minority language immersion program performance (from other studies), the relevent factor must be social psychological factors and not language of instruction or linguistic level.

Comments

While the study itself appeared to have a sound design and thorough statistical procedures were carried out, one of the major questions or aims of the study (that of looking at the effect of social psychological factors) was not addressed directly in the design of the study but only by indirect comparisons to other studies.

Bruck, M. (1979). Switching out of French Immersion. Interchange, v9, p86-94.

Problem

The authors aim in the present study was to deal with at least some of the following issues regarding children having learning difficulties switching from French Immersion: when is the optimal time; does it affect academic achievement; does it have any social consequences; and is their any difference in short and long term consequences?

This was to be carried out by studying children who had switched out of French Immersion after at least one year.

Procedure

The sample consisted of 9 subjects who switched out of French Immersion after at least one year and who had been tested annually as part of another research project while in the program. At the time of the author's follow-up the children were at various ages.

Various data were collected on the children including: baseline data when they were in the program (IQ, achievement & teacher reports); results of academic tests individually administered in June of the follow-up year (Spache, Metropolitan Achievement Test-Math, and the WRAT); a school academic history; interview and questionaires and rating scales given from teachers; and information from the parents.

Findings

Three representative case studies were reported.

(1) Gary (age 8, grade 3) was switched out of the program after grade 2 as requested by his parents because they felt his potential was not being met in the program. Test data and histories indicated average achievement or slightly below but no indication of serious problems. His performance on the follow-up battery 6 months after being in the English stream was comparable, though reports of the English teacher and parents indicated the switch as a success.

The author reported two more which were similar in that the switch either appeared to bring about either some improvement (at least in the eyes of the parents) but test data made the judgement equivocal. There was generally no clearcut improvement and in some cases serious problems were later encountered. In a similar way the author discussed the similarities of the remaining 6 cases.

Conclusions

The following conclusions were made: (1) The consequences of switching are difficult to evaluate and

there are few unqualified successes (2) Judgements of success seem to be greater the more recent the switch either because of unobjective observations or because of the Hawthorne effect, (3) Parents probably tend to judge a switch to the English as successful because they feel more competent in being able to help the children with their homework, and (4) switched students probably do better because the switch is usually accompanied with extra remediation not usually given in the French stream.

Comments

The present study had obvious limitations some of which were noted by the author. One of the most pressing problem to interpretation involves the fact that there were no control groups to control for the possibility that only certain types of people might switch from French Immersion or that those who switch usually recieve remediation and so on. In addition, the present sample was heterogenous on too many variable to be able to draw many firm conclusions. For instance, subjects varied (not systematically) on such factors as the time at follow-up, how long they were in the program and so on. These factors make it possible to do little more than conclude that the result of moving out is not clearcut and requires further research.

In sum, not many, if any, of the orignal issues, such as whether French Immersion causes LD, were settled.

Damico, J., Oller, D., and Storey, M.E. (1983). The diagnosis of language disorders in bilingual children: Surface-oriented and pragmatic criteria. Journal of Speech and Hearing Disorders, 48, 385-394.

Problem

The author's aim here was: (1) To illuminate the difficulties of assessing language disorders in bilingual children which involve trying to decide whether difficulties experienced by these children are language disorders or simply "interlanguage phenomena"; and (2) To determine whether the use of pragmatic criteria might not improve recognition of language impairments in bilingual children over the use of traditional surface criteria alone.

Procedure and Findings

Subjects included students selected at random from an Albuquerque public school system who fit the following criteria: (1) Spanish was the first language and they were in the process of learning English; (2) They had spent less than 2 months in an English Speaking School; (3) They had been referred for assessment because of a possible language disorder; (4) The first language was spoken in the home; (5) Less than 5 months had been spent in an English neighborhood; (6) Examinations eliminated

articulatory and other such disorders as possible causes; (7) There was no neurological dammage or MR; and (8) No special education service had been given. The resulting 10 students (six males and 4 females) ranged in age from 6:4 to 8:3 (years:months) with a mean of 6:11.

Phase One - Diagnosis:

Spontaneous Speech Samples were recorded (in English and Spanish) in three different contexts. One hundred and Eighty utterances were derived from these samples using the following criteria or definitions for an utterance: (1) Any phonological unit between two juctures, and (2) Any meaningful communicationial unit with a unique propositional meaning.

A surface structure analysis was carried out using the following procedure: (1) Using grammatical intuitions, non-normative utterances were identified by native speakers with training in liguistics and clinical experience; and (2) Non-normative utterances were analysed for surface structure (and pragmatic) deviations using standards established in previous studies.

The pragmatic analysis was carried out using the following 7 criteria (used in a previous study): (1) linguistic nonfluencies; (2) Revisions; (3) Delayed responses; (4) non-specific vocabulary; (5) inappropriate responses; (6) Poor topic maintainance and (7) need for repetition.

The dependent measure was quantified as the percent of utterances exhibiting 1 or more difficulties (surface level or pragmatic, in English or Spanish).

Results of Phase One:

The reliability of the experimenters' judgements was measured using the Barry-Blackely et al (1978) "indices of agreement" approach in which qualified Speech-langquage pathologists re-evaluated text from 2 randomly chosen subject samples. In both English and Spanish, the indi es of agreement in percent for transcription was in the eighties and nineties and agreement on syntactic and pragmatic difficulties was in the nineties.

For each subject a pragmatic score and a surface criteria score was obtained in English and Spanish. For diagnostic purposes, a score of less than 20% and greater than 30% were deemed to be normal and language disordered respectively. Of the ten subjects, the pragmatic criteria identified subjects 2, 6 and 7 as normal (ie. fewest difficulties in both languages). Surface criteria identified 3 different subjects (1, 4 and 9) as having the fewest difficulties in both languages. Subject 2 had the most surface difficulties in both languages.

Phase two - Predictive Validation:

The premise was that normals would benefit more from the exposure to English in school and neighborhood than language disordered. The PIAT was administered by a Spanish clinician before and after 7 months of immersion in an English environment and the Pupil Rating Scale (Myklebust) was also administered before and after by the teacher.

Results of Phase Two:

Age, PIAT scores, and Myklebust scores were reported before and after the immersion period. In addition, gain scores (in percentiles), and means of those identified by the pragmatic criteria as normal and disordered respectively, were reported.

The improvement was shown to be greater for those predicted to be normal by the pragmatic criteria. The mean gain on the PIAT was 33 percentile points and 6.6 percentiles respectively for the normals and disordered respectively. On the Myklebust the gain scores were 2.4 and 0.2 respectively.

According to Surface Criteria, by comparison, predicted normals gained only 7.7 percentiles on the PIAT and fell an average of 0.1 on the Myklebust.

Conclusions

The main conclusions by the author were as follows:

(1) Pragmatic criteria appear to be more effective than Surface-Oriented criteria in identifying the language disorders that are apt to have academic consequences.

(2) Pragmatic criteria should supplement or even replace surface-oriented criteria for diagnostic purposes.

(3) Traditional Surface-Oriented criteria fail to differentiate bilingual language disorders from normal "interlanguage phenomena".

Comments

Overall, the research appears to have been conducted in a competent manner whereby possible extraneous factors such as practice effects and inter-rater unreliability seemed to have been considered.

Concerns involve the following: No statistical analysis was reported; and carrying out the initial screening for utterances by intuition alone may be a potential source of unreliability. Another factor that might affect the results involves the selection of subjects. One of the required criteria was that the child was referred for assessment. To the teachers interracting with the students and making the referrals, pragmatic criteria might play a large role in their referral decisions since they might be rather evident. If this were the case, then one would expect the pragmatic criteria to be more effective in distinguishing subjects as was found in the study.

Gajar, A.H. (1987). Foreign language learning disabilities: The identification of predictive and diagnostic variables. Journal of Learning Disabilities, v20, p327-30.

Problem

The purpose of this research was to "identify diagnostic predictors of success in learning a foreign language for normal university students, to develop university norms for these predictors, and to compare the performance of learning disabled university students on these predictors.

Procedure

The Modern Language Aptitude Test (MLAT) was chosen for the study because it, reportedly according to the literature, measures a variety of abilities thought to be related to foreign language learning abilities, measures areas related to learning disabilities, and because it is believed to be the best predictor of foreign language learning.

The test was administered to all regular students enrolled in introductory French, German, and Spanish classes. These scores were then compared to their final grades in the foreign language class using a multiple regression equation. Subsequently, MLAT scores of LD referred students were compared to a randomly selected norm sample on each predictor using t-tests.

Descriptive parameters (such as age, sex, grades etc.) of the normal comparison population (244 students) and the normal group (50 students) randomly selected from it were given and shown to be within normal ranges with respect to those variables. The LD group were diagnosed by qualified staff at the university based on a severe discrepency (greater than 1.5 SD) between ability and achievement, as measured by a variety of measures (WAIS-R, Woodcock-Johnson Psychoeducational Battery (Part 2), the MLAT and a writing sample. Other variables (such as background information) were also considered. Parameters of the sample, all of whom had been referred for a variety of reasons, were also given.

Findings

The stepwise regression analysis between MLAT and grades (as independent variable) yielded Rs of .417 and .424 for the 4th and 5th subtests of the MLAT respectively. The comparison between the LD subjects and the norm on the MLAT yielded significantly lower scores on all five subtests for the LD subjects.

Conclusions

The author made the following conclusions from the results: (1) the 4th subtest (which assesses a

"sensitivity to grammatical structure") and the 5th subtest (which assesses possible memory deficiency) predict a moderate relationship to success in foreign language programs; and (2) that students with high academic potential and attitudes but low MLAT scores may be LD.

Comments

Even though the design may allow us to draw the conclusion that MLAT scores are related to performance in foreign language classes it does little more than lend support to a hypothesis that learning disabled students may have difficulty learning a second language, since their scores were lower than the normals in every case. That is, it does not further the concept of "foreign language learning disability".

Ganschow, L., & Sparks, R. (1986). Learning disabilities and foreign language difficulties: Deficit in listening skills. Journal of Reading Writing and Learning Disabilities. v2, p305-319.

Problem

The primary aim for this research was to study the characteristics of college students who have suspected learning disabilities and the types of problems they have in learning a foreign language.

The case study approach is used to help build researchable hypotheses.

Procedure

Case study subjects consisted of 4 college students having difficulties learning a foreign language and who were suspected of having learning disabilities. Information gathered via: (1) a complete history, and (2) the administration of standardized tests (the WRAT, the Woodcock-Johnson Psychoeducational Battery, and the Test of Adolescent Lanuage).

Findings

Four case studies were reported. In the discussion the author highlighted common elements found in the case studies. These included: (1) a history of learning problems that were language related, (2) learning styles reflecting difficulty in lectures and laborious methods used in order to remember material, (3) difficulty in learning a foreign language, particularly with the oral approach to teaching ("audiolingual deficit"), and (4) standardized tests scores characterized by large discrepencies in academic areas, and weaknesses in areas requiring listening strengths as apposed to expressive strengths.

Conclusions

The author drew the following conclusions from the results: (1) The common theme of difficulty with listening comprehension observed with the students is tied to difficulties in the basic understanding of elements of language structure and thus may affect foreign language learning, (2) the components of language structure such as phonology, syntax and semantics, which may be affected by listening comprehension difficulties would be fruitful areas for future research into foreign language LD, (3) the TOAL and other instruments need to be researched for their strengths in detecting students who may have difficulties with listening aspects of a foreign language, and (4) other types of language learning difficulties probably exist (e.g. difficulties in other modalities).

Comments

The limitations of this research include the fact that the low N and the case study approach restrict generalizations that can be made. In addition, though the focus on listening comprehension difficulties does seem be an justified as one would expect such students to have difficulties learning a foreign language, it probably focuses on students who are likely to have difficulties in many other areas and excludes some students without this difficulty who might nonetheless experience difficulties learning a foreign language. More extensive research with controls for some extraneous variables is needed.

However, the present research does provide possible routes to explore in the effect of learning disabilities on foreign language learning.

Jung, U.O. (1981). The grammatical abilities of German dyslexics in English as a foreign loanguage. System, 9, 223-233.

Problem

The major aim was to determine whether problems experienced by dyslexics in their first language (German) also handicap them in learning a new language (English) where they begin on "equal footing" compared with their peers.

Procedure

Subjects included 31 diagnosed dyslexics and 31 non-dyslexics selected at random from a population of 300 students involved in the DEA Project (Didactic Differentiation in Beginning English Classes with Particular Reference to Slow Learners). The results of tests used in this project were analysed for the purposes of the present study.

Two types of tests were administered:

(1) On the first day tests were administered to test classical structural areas of spelling, grammar and vocabulary using a multiple-choice format.

(2) Communicative competence was tested by giving a context situation in German, then formulating a task to be completed. This yielded 923 and 946 processable grammatical phenomena for dyslexics and non-dyslexics respectively.

The data was evaluated using the Dulay & Burt technique to test for the acquisition of grammatical morphemes. In this procedure, 0 points were awarded for an omitted morpheme, 1 for the use of the wrong morpheme and 2 the the use of the correct morpheme. Finally the percent accuracy for a given morpheme was calculated.

Findings

Results were reported on a learning curve with percent correct versus morpheme plotted separately for dyslexics (n=31), non-dyslexics (n=31) and for an immigrant group (n=28). Except for the copula, non-dyslexics scored higher than dyslexics and the immigrant group but the curves proved to be relatively parallel.

Conclusions

The major conclusions were as follows:

(1) Foreign language acquisition strategies are likely to affect functioning in foreign language classes;

(2) "These figures show...that different populations move at different rates through the same, as yet hypothesized, stages of the learning/acquisition order. They all proceed along the same path; some arrive early, some late."p33

Comments

Some things lacking include a statistical analysis, a discussion of the criteria for identification of children in the project LD, and a descriptive parameters of the subjects.

As stated by the author, there was a small number of analysable grammatical phenomena and had more phenomena been used the resultant picture might have been different.

In addition, the evaluation technique looks at the childs speech at one point in time. This is a particular drawback in the present study since researchers have found that the acquisition of morphemes is not static and may depend on factors such as the context.

Meara, P., Coltheart, M., and Masterson, J. (1985). Hidden reading problems in ESL learners. IESL Canada Journal: Teaching English as a Second Language, 3, 29-35.

Problem

In the comparison of a native Spanish Speaker's reading and spelling difficulties in Spanish and English, it is argued that surface dyslexic type difficulties will be less obvious in Spanish because the spelling system of Spanish is regular whereas English is irregular.

Procedure

The Raven's was administered as an Intelligence test.

Subsequently, a series of tests were administered in English to test for dyslexia including: (a) Reading aloud regular and irregular words; (b) Spelling to dictation; and (c) A test of the comprehension of written homophones.

The following tests were administered in Spanish: (a) A homophone test; (b) Spelling to dictation; and (c) Reading aloud Spanish words and legal nonwords.

Findings

In reading words in English, the subject made 21 errors out of 78 words with twice as many errors in reading irregular words. In Spanish, only 3 out of a possible 500 errors were made. Also, 3 errors of a possible 74 were made on legal nonwords.

For spelling in English, 51 errors in 100 were made compared to 14 errors in 24 words in Spanish.

In testing understanding of homophones, 41 errors in 100 were made in English whereas 24 errors in 40 trials in Spanish.

Conclusions

The tests reflect that the subject has little difficulty in dealing with Spanish writing because Spanish orthography is regular in most everyday situations whereas English isn't.

The author illustrates two models or routes towards the understanding of written words. The first goes from the written word to the orthographic representation, then to the phonological representation (which is derived from the spoken word) and finally to the mental lexicon. The second route bypasses the phonological representation and goes directly to the mental lexicon. The author proposes that (1) the latter route is blocked for surface dyslexics who must access the phonological representation and (2) that since Spanish is such a regular language, the direct link in the latter route is not often necessary so difficulties in using this route by surface dyslexics might not be readily apparent.

Comments

There was no discussion of statistical analysis or how the Spanish versions of the tests were constructed.

The case study approach does help to raise some interesting questions regarding learning disabilities and learning a second language and the arguments appear to be sound. However, the approach in the present research does not allow us to eliminate many other factors as possible explanations. For instance, since there was no determination of the relative language proficiency in English and Spanish, transitional phenomena, instead of dyslexia, cannot be ruled out as an explanation.

Perozzi, J.A. (1985). A pilot study of language facilitation for bilingual, language-handicapped children: Theoretical and intervention implications. Journal of Speech and Hearing Disorders, v50, p403-406.

Problem

The aim of this study was to explore the facilitation effect of L1 on L2 learning from majority to minority and from minority to majority languages for language disabled and normal students.

Procedure

The 6 subjects consisted of preschool children from a Head Start day care centre. There were 3 Spanish-speeking subjects (1 language delay, 1 disordered and 1 normal) and 3 English-speeking subjects (2 normal and 1 as delayed). All were between 4 and 5 years of age.

An experienced speech-language pathologist determined subjects native language by obtaining a case history. To be designated as a Spanish speaker, for instance, only Spanish could be spoken in the home. Diagnosis of level of language functioning was done by administering the Assessment of Children's Language Comprehension (ACLC) in the English version for English subjects and with the Spanish adaptation for Spanish subjects. The ACLC was only used clinically as a criterion measure because it was psychometrically questionable. The TOLD was administered only to English subjects to test receptive and expressive language. Finally, an expressive language sample was obtained for all subjects in different contexts.

The diagnosis was a clinical impression of the diagnostition.

A bilingual/bicultural clinician was trained to administer the learning tasks.

Twelve vocabulary items for 4-year-olds and 16 for 5-year-olds in each language (Spanish translation made for the study) that each subject did not know were selected from levels 1 and 2 of the PPVT cards in the following manner: cards were presented in groups of 4 and the child was required to select one named by the examiner in the childs native language; those same pictures were presented each with 3 "foils" and the child was required to select the one named in his nonnative language.

The unrecognized pictures were then divided into 4 equal sets and each set (less one since one in each set remained as a "foil") was presented to the child in a learning procedure involving the use of reinforcers.

The 4 repeated measures conditions were set up for each child as follows: A(L1-L2), B(L2-L1), B(L2-L1), A(L1-L2). That is, for example, in condition A the child learned in L1 then in L2. The number of trials to criterion (3 consecutive correct responses) was measured for each word and totaled for each set. Point to point interobserver reliability was measured and was between 97

and 100% for all subjects.

Findings

There were 11 of 12 comparisons in which trials to criterion were shorter for the condition (A) where learning words in L1 preceded learning words in L2 as compared to the reverse condition (B). This was a significant finding using the sign test.

In 9 of 12 comparisons the trials to criterion were also found to be significantly lower for both L1 and L2 in the condition A above.

Conclusions

The following conclusions were made:

(1) The practice of initial intervention in Spanish for Spanish-speaking, language-handicapped children would facilitate reaching the goal of bilingualism.

(2) Results support transference/facilitation theories of L2 learning (e.g. Cummins, 1981)

(3) Some other variables affecting indivual performances were discussed.

Comments

Though the trends are unquestionable the obvious major concern with this study relates to the extremely small sample. Interpretations can be nothing more than tentative. In addition, a stronger statistical procedure would also be needed in order to be able to place more faith in the results.

On the positive side, counterbalancing was attempted and this fact helps to rule out possible confounds in the order of presentation.

The major issue of concern in the study relates to the possible importance of having a firm grounding in L1 before being successful in L2. This may have serious implications for the language disabled child who is having difficulties in L1.

Trites, R.L. (1979). Specific learning disabilities in primary French Immersion. Interchange, v9, p73-85.

Problem

The author had two main purposes for the research: (1) to determine if there was a "characteristic neuropsychological test profile based on extensive individual studies of children who have difficulties in primary French immersion", and (2) to see if these children were similar to other children who have difficulties in school.

Procedure-1

There were two studies, one conducted in each year of the 2-year study.

The first study consisted of eight groups of children matched on several variables.

(1) The French Immersion difficulty group: consisted of 32 children who had been either experiencing problems in French immersion or had switched out of it.

(2) the Anglophones in Francophone schools
(3) Ethnic groups in Anglophone Schools
(4) Francophones in Francophone schools
(5) Reading disability
(6) Hyperactive
(7) Behaviour and personality problems
(8) Minimal brain dysfunction

The first 3 comparison group had a langugage component. The author included a table with descriptive statistics of the groups such as age (which ranged from between 7 and 8) and sex distribution (which reflected primarily males in the sample).

For each child, an extensive history and an extensive individual neuropsychological assessment was carried out (details were noted in the report).

Findings-1

In the analysis, age differences were controlled by calculating T scores for the tests which were not easily compared across age levels. The tests were divided into the following 4 groupings: (1) general intelligence and academic functioning; (2) perceptual tasks; (3) lateral dominance and accuracy; and (4) sensory and speeded tasks. Then a factor analysis (with a varimax rotation) was carried out on each group and identified 14 factors in total.

The factor scores were used as new dependent variables and the 8 groups as independent variables in a discriminant function analysis. A discriminant function analysis was carried out to ensure that significant differences between the groups could be accounted for. Seven independent two-group discriminant function analyses were performed comparing the French immersion problem

group with each of the comparison groups. The result of these analyses indicated that a reasonalble percentage of the cases were correctly classified in the groups.

The immersion problem group had the highest IQ, no evidence of a language or perceptual deficit and average sensory and motor functions. By comparison they had relatively more difficulty than other groups on the Tactual Performance Test (Trites, 1977b), a complex psychomotor problem-solving task.

Conclusions-1

The author states that under certain conditions, performance on the TPT has specific implications with regard to adequacy of functioning of the temporal lobes. He then concludes that the French immersion group has a unique learning difficulty based on a pattern of deficits which he considers to indicate a maturational lag in the temporal lobe.

Procedure-2

In the second year of the study, the author compared 16 immersion dropouts (who had dropped out because of learning difficulties) with 16 matched controls who stayed in the program. Desciptive parameters were also provided here.

An extensive history was taken, a neuropsychological battery was given and a battery of reading subskills tests were given.

Findings-2

The Q technique of factor analysis (Nunnally, 1967) and cluster analysis (Overall & Klett, 1972) were used to classify subjects with similar patterns into groups. Differences between the groups were accounted for by measures of intelligence, language functions, reading achievement, psychomotor proble solving (TPT), and behaviour ratings. Further t-test comparisons of the measures on the TPT yielded some significantly lower scores for the younger children (below age 9) of the immersion group in certain psychomotor problem-solving areas.

Conclusions-2

The author concludes that: (1) Neuropsychological test profiles of dropouts and controls was substantially different, (2) These results are consistent with the first studies results, (3) The psychomotor-problem solving deficit only in the younger children is consistent with the maturational lag hypothesis from the first study, and (4) Children who have this developemental lag should be identified and educated in their first language until 9 or 10.

Comments

The studies utilized some very complex statistical procedures and care seemed to be taken in controling for many variables.

An important concern involves the use of the TPT. The main conclusions of the study seem to be dependent upon the validity of the interpretation of the TPT scores which, by the authors own admission is difficult and which has not been proven.

Wiss, C.A. (1987). Issues in the assessment of learning problems in children from French immersion programs: A case study illustration in support of Cummins. The Canadian Modern Language Review, v43, p302-313.

Problem

The purpose was to illustrate the hypothesis (by way of a case study) that children who have an academic problem in one language as a result of underlying cognitive deficits should evidence the same difficulties in their second language (French in this case). This would then lend support to Cummins (1984) "Common Underlying Proficiency Hypothesis".

Procedure

The subject was a girl (9-6 years old and in grade 4.2) who has been in French immersion since beginning school at age 6. She has begun to rec ve, in grade 4, one hour of English instruction per day. The subject's problems were first noticed in grade one at which time she received extra help. It was observed that she was socially fine although ashamed of her reading problem.

A complete psychoeducational assessment was carried out. In addition, spelling and reading were tested using the Boder Method (Boder 1971, 1973; Boder and Jarrico, 1982). In English, a standard administration was used while pilot word lists were used in the French version.

Findings

The psychoeducational battery revealed the following: average intelligence, a slight underachievement in reading and spelling, and a processing deficiency in auditory analysis and sequencing.

On the Boder in English the subject spelled 30% of his known words correctly, had no phonetic equivalents for unknown words and a Reading Quotient (RQ) of 87. This prophile , according to Boder criteria, reflected a "mixed" subtype in which the subject had both auditory and visual deficits. In French, 60% of known words were spelled correctly, 20% of unknown words were good phonetic equivalents and the RQ was 87. This was a "disphonetic" subtype (ie. displayed auditory deficiency).

Informal analysis of spelling in English and French and other standardized scores, such as sequential processing on the K-ABC, supported auditory deficiencies. In addition reading comprehension in both languages was low.

Conclusions

The author interpreted the psychoeducational results as being a classical LD profile. The "mixed" subtype result found on the Boder in English was interpreted as

being just disphonetic because of a boderline RQ and the fact that low visual processing might be explainable by a lack of exposure to English. Therefore the results overall reflected an auditory deficiency across both languages which is in support of Cummin's (1984) theory of cognitive skills underlying cross-linguistic competencies. That is, it illustrates the derivative of the theory that "underlying deficient cognitive skills should result in cross linguistic learning disabilities"p31. The author concludes that an English only assessment might have lead to misclassification as a "mixed" subtype which might have lead to ineffective remediation.

Comments

Comments regarding the methodology include the following: (1) the sensitivity of the Boder procedure in "fitting" children into one of the the three areas of diagnosis is questionable; (2) a case study limits generalization of the results to others; and (3) the rest of the assessment however seemed to be thorough and complete.
In general the paper seems to raise some issues but does not appear to offer any conclusive results. The issue of language dominance and language proficiency would be expected to play a role in the results and it is difficult to separate these factors from "true" reading or language disabilities. Also, those factors may be different depending on what aspect of language one assesses. Finally, sociocultural factors can be expected to play a role in, for instance, a child's motivation to learn the second language.